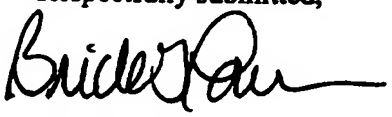
REMARKS

This amendment corrects errors in the text and drawings. Entry is respectfully solicited. This amendment is submitted prior to or concurrently with the payment of the issue fee and, therefore, no petition or fee is required. No new matter has been added.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please replace paragraph number **[0064]** with the following:

[0064] As an alternative to the use of a photomask, a hard mask, such as a silicon oxide or silicon nitride hard mask, may be formed on either backside 76 of wafer 72 or over active surfaces 15 of semiconductor dice 12. Streets 74 may then be etched through, as known in the art. Such a hard mask need not be removed from wafer 72.

Please replace paragraph number **[0086]** with the following:

[0086] With reference to FIG. 17, when material 86 (FIG. 15) in each of the regions of layer 108 (FIG. 15) that correspond to solid areas of the corresponding layer of the object to be fabricated have been exposed to laser beam 98 (FIG. 15), a first particle layer 108a (FIG. 17), or first preform layer, is formed. First particle layer 108 has at least the peripheral outline of the corresponding layer of the object being fabricated at that vertical or longitudinal level, material 86 within apertures or voids in layer [110]108 remaining unconsolidated as loose, unfused particles.

Please replace paragraph number **[0087]** with the following:

[0087] Next, platform 90 is indexed downwardly a vertical distance which may or may not be equal to the thickness of the just-fabricated layer 108a (i.e., a layer-manufactured structure may have layers of different thicknesses). Another layer 108b of unconsolidated particulate material 86 is then formed over layer 108b as previously described. Laser beam 98 is then again directed toward selected regions of the new layer 108b to follow a horizontal pattern representative of a next, higher layer or slice of the object to be fabricated, as numerically defined and stored in computer 82. As each successive layer 108 is formed by consolidating material 86 in selected regions, the consolidated material is preferably also secured to the immediately underlying, previously fabricated layer 108. It will be appreciated that, in FIG. 17, the

thicknesses of each layer 108 has been exaggerated to clearly illustrate the layered manufacturing process.

Please replace paragraph number **[0090]** with the following:

[0090] As an alternative to the use of a laser to sinter or otherwise bond particles of material 86 in the selected regions of each unconsolidated material layer [108] together to form layers [110]108a, 108b, an ink jet nozzle or a metal spray gun may be employed as the fixative head. Exemplary apparatus including such fixative heads and exemplary uses thereof are disclosed in the following U.S. Patents: 5,340,656; 5,387,380; 5,490,882; 5,490,962; 5,518,680; 5,660,621; 5,684,713; 5,775,402; 5,807,437; 5,814,161; 5,851,465; and 5,869,170, each of which have been assigned to the Massachusetts Institute of Technology, Cambridge, Massachusetts. The disclosures of each of the foregoing patents are hereby incorporated by this reference. Such a fixative head deposits a liquid binder (e.g., resin or metal) over the particles of material 86 in selected regions of each layer 108, penetrating therebetween and solidifying, thus bonding particles in the selected regions of layer 108 to at least partially consolidated regions of the next underlying formed layer [110]108. If an ink jet nozzle is employed as the fixative head, the binder may comprise a nonmetallic binder such as a polymer compound. Alternatively, when a metal spray gun is used as the fixative head, a metallic binder such as a copper or zinc alloy or Kirksite, a proprietary alloy available through Industrial Modern Pattern and Mold Corp., may be employed. In the case of a metal alloy, the binder may be supplied in wire form which is liquified (as by electric arc heating) and sprayed onto the uppermost particulate layer. Another alternative is to liquify the distal end of the binder wire with a laser or other heating means immediately above the unconsolidated powder layer rather than using a metal spray.

Please replace paragraph number **[0099]** with the following:

[0099] Continuing with reference to FIGs. 15 and 17, a substantially uniform layer 108 of material 86 is disposed over wafer 72 or the one or more semiconductor dice 12 or other

substrates on platform 90 to a depth substantially equal to the desired thickness of a formed layer [110]108 of hermetic package 20.

Please replace paragraph number **[0100]** with the following:

[0100] Laser 92 is then activated and scanned to direct beam 98, under control of computer 82, toward specific locations of surface 88 relative to each semiconductor device 10 or other substrate to effect the aforementioned partial cure of material 86 to form a first layer [110a]108a of each hermetic package 20. Platform 90 is then lowered and another layer 108 of material 86 of a desired thickness disposed over formed layer [110]108a. Laser 92 is again activated to add another layer [110b]108a to each hermetic package 20 under construction. This sequence continues, layer by layer, until each of the layers [110]108 of each hermetic package 20 have been completed. As illustrated, layers [110]108 are first formed laterally adjacent edges of a semiconductor die 12 or other substrate, then over one of the major surfaces thereof (e.g., active surface 15 or back side 13). Each semiconductor die 12 or other substrate is then inverted on platform 90 and the remaining layers [110]108 of hermetic package 20 are formed. Of course, a portion of hermetic package 20 may be prefabricated and disposed on platform 90 prior to the disposal of one or more semiconductor dice 12 thereon. Other stereolithographic fabrication sequences for hermetic packages 20 are, of course, also within the scope of the present invention.

Please replace paragraph number **[0101]** with the following:

[0101] In FIG. 17, the first, bottommost layer of hermetic package 20 is identified by numeral [110a]108a, and the second layer is identified by numeral [110b]108b. As illustrated, hermetic package 20 has only a few layers [110]108. In practice of the invention, however, hermetic packages 20 may have many thin layers [110]108. Accordingly, hermetic packages 20 with any number of layers [110]108 are within the scope of the present invention.

Please replace paragraph number **[0102]** with the following:

[0102] Each layer [110]108 of hermetic package 20 may be built by first defining any internal and external object boundaries of that layer with laser beam 98, then hatching solid areas of that layer of hermetic package 20 located within the object boundaries with laser beam 98. An internal boundary of a layer may comprise a portion, a void or a recess in hermetic package 20, for example. If a particular layer includes a boundary of a void in the object above or below that layer, then laser beam 98 is scanned in a series of closely spaced, parallel vectors so as to develop a continuous surface, or skin, with improved strength and resolution. The time it takes to form each layer [110]108 depends upon the geometry thereof, the surface tension and viscosity of material 86, and the thickness of that layer.